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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,582

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Pascale Brassier

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EXAMINER

KIRKLAND III, FREDDIE

ART UNIT

PAPER NUMBER

2855

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,582	Applicant(s) BRASSIER ET AL.	
	Examiner Freddie Kirkland III	Art Unit 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-10 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/5/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

FIRST NON-FINAL REJECTION

Claims 1-4 are canceled by the applicant therefore withdrawn from consideration.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shigyo US Patent 5,564,641 in view of Williams US Patent Application Publication 2002/0000128.

With respect to claim 5, Shigyo teaches calibrating a film (pressure measuring film 18) by testing an impact on test parts covered (film 18 is pressed between cylinder head 12 and cylinder block 10 and is used in order to determine the force between the them) in the film that are identical to a structural composite material part (the testing is being read as calibrating because the limitations claimed are essentially a testing method) or on test tubes covered in the film, representative of the structural composite material part, to establish a link between a received shock force (applied pressure between head 12 and block 10) and a change in color in the film (detected color change of film 18); evaluating impacted areas (scanner 20 reads the color of the film 18 after impact, col. 5 lines 38-58) of the test parts or test tubes using an appropriate qualification method to correlate the change in color in the film and a nature and extent

Art Unit: 2855

of any structural disturbance of subjacent layers of the impacted area (the color density is determined and is used to determine the relationship between the color and pressure applied by using a calibration graph, col. 5 lines 44-58); and establishing a scale of correspondences enabling qualification against a limiting threshold for acceptance of the evaluated part (The maximum pressure is determined by a processor 30 from the detected density distribution by the scanner 20. The maximum pressure is being read as the limiting threshold for the acceptance of the part, col. 1 lines 15-45, col. 2 lines 13-33 and lines 57-57, col. 3 lines 1-57, col. 4 line 1-21, col. 5 lines 4-67, col. 6 lines 1-13).

But Shigyo fails to teach the evaluating impacted areas of the test parts or test tubes using an appropriate qualification method selected from the group consisting of: x-ray or ultrasound.

Williams teaches a detection coating system wherein a coating of microcapsules 44 are used in order to determine stress on a structure and X-ray scanning can be used for flaw detection in the materials (paragraphs 12, 16, 24-33).

Accordingly, it would have been obvious to one of ordinary skill in the art of impact detection using pressure measuring films at the time the invention was made to modify the scanner of Shigyo to use X-ray scanning as taught by Williams in order to evaluate the film easily and accurately which reduces the number of inspections needed and this will minimize cost (Williams paragraph 16).

With respect to claim 7, Shigyo teaches wherein the film comprises a matrix with drowned microcapsules (film 18 contains a matrix a microcapsules, col. 5 lines 4-25) susceptible to breaking up under stress of a determined threshold of force (the microcapsules break under stress).

Art Unit: 2855

With respect to claim 9, Shigyo teaches wherein the film is selected from commercially available films available in various levels of pressure sensitivity and (film 18 is being read as selected film, col. 2 lines 57-65), wherein an appropriate level of pressure is chosen by a limited force of impact that is acceptable for the structural composite material part when placed under such pressure (The film is being used in the apparatus and the pressure is determined therefore the force must be acceptable).

Claims 6, 8, and 10, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shigyo US Patent 5,564,641 in view of Williams US Patent Application Publication 2002/0000128 and further in view of Patterson GB 2107213.

With respect to claims 6, 8, and 10, Shigyo as modified by Williams teaches the claimed invention except wherein the structural composite material part comprises a high-pressure gas or liquid tank usable for space launches, the structural composite material part comprising an impermeable internal metal or plastic layer upon which pre-engaged resin fibers are wound.

Patterson teaches a coating which is applied to a fibre reinforced aerospace component to provide a visual indication the object has sustained an impact which might have caused damage (abstract, page 1 lines 30-52).

Accordingly, it would have been obvious to one of ordinary skill in the art of pressure measuring coatings at the time the invention was made to further modify the method as taught by Shigyo modified by Williams to measure the impact and damage on aerospace parts as taught by Patterson in order to provide an accurate and easily usable apparatus and method for determining structural damage to aerospace parts.

Art Unit: 2855

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents: 6,668,661; 6,033,987; 5,059,261; and 4,104,910 are believed to relevant pressure measuring film prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freddie Kirkland III whose telephone number is (571)272-2232. The examiner can normally be reached on Monday through Friday 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lisa Caputo can be reached on (571) 272-2388. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Freddie Kirkland III/
Examiner, Art Unit 2855
7/12/09